

***Drawings Objection***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show method steps and a system comprising physical components to process the method steps. Therefore, the method for operating an antenna system from claims 13, 15-25 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 24-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- "Generating the second partial antenna from the first partial antenna ..."

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- "Mean for generating the second partial antenna ..." is unclear. The phrase "mean for" must show a sufficient structure, material or acts for achieving the specified function.

What is a structure of the antenna system performing the generating?

***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claim 13, 15-25 are rejected under 35 U.S.C. 102(a) as being anticipated by Ziller (7081847).

With regard to claim 24-25, Ziller discloses:

- Operating the 1<sup>st</sup> partial antenna, the received 1<sup>st</sup> signal having a 1<sup>st</sup> broad directional dependence (see column 5, lines 23-27).
- Generating the second partial antenna from the first partial antenna by connecting at least one additional antenna element to the first antenna (see column 5, lines 23-52).
- Operating the second partial antenna to transmit and receive second signals, the received second signals having a second broad directional dependence with a notch of missing or reduced intensity within a narrow angular region (see column 5, lines 38-52).
- Alternating cyclically execution of steps above (see column 6, lines 29-34).
- Subtracting two signals detected above to generate a third directional dependence which is substantially narrower than both the 1<sup>st</sup> directional and the second direction dependence (see column 5-6, lines 59-9).

With regard to claim 13, Ziller teaches a frequency for switching between the 1<sup>st</sup> and 2<sup>nd</sup> partial antenna (see column 6-7, lines 29-7)

Art Unit: 3662

With regard to claim 15, Ziller teaches controlling the second partial antenna by operating the first partial antenna along with simultaneous operation (see column 5, lines 38-44)

With regard to claim 16-18, Ziller teaches the partial antenna comprise a plurality of antenna elements and disposed in rows (see Fig.3)

With regard to claim 19-20, Ziller teaches the first and second rows of antenna elements are in parallel (see Fig.1) and have a mutual separation of  $\frac{1}{2}$  of wavelengths is inherent.

With regard to claim 21-23, Ziller teaches a computer program to perform the method (see column 6, lines 58-65).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGA X. NGUYEN whose telephone number is (571)272-5217. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARCZA H. THOMAS can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NGA X NGUYEN  
Examiner  
Art Unit 3662

NXN

/Thomas H. Tarcza/  
Supervisory Patent Examiner, Art Unit 3662